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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S)	Pennaz, et al.	GROUP ART UNIT:	2827
APPLN. NO.:	09/532,807	EXAMINER:	Cuneo, Kamand
FILED:	3/21/00		
TITLE:	CIRCUIT CHIP CONNECTOR AND METHOD OF CONNECTING A CIRCUIT CHIP		

Certificate of Mailing

Date of deposit: November 20, 2002

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AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Responsive to the Office Action dated 7/31/02, Paper No. 6, and Examiner's comments with regard thereto, please enter the following amendments in the above-entitled application, without prejudice or disclaimer.

A Petition for Extension of Time to respond, with fee authorization, is submitted concurrently herewith.

IN THE SPECIFICATION:

Please amend the paragraph starting on Page 8, line 9, and ending on line 16 as follows:

With the disclosed interposer, an IC is not directly mechanically and electrically attached to the antenna. The IC is attached to an interposer so that it can be positioned at the connection ends of the antenna circuit. The interposer comprises a base substrate film with two printed pads. An IC is connected between the two electrically isolated pads. The interposer can provide

added structural support and can secure the internal components. Other flush mount components, such as light emitted diodes (LEDs), can be attached using similar techniques. This removes the limitations for precise placement on the leads of a circuit. Additionally, IC's can be mounted on conventional circuits via an interposer.

Please amend the paragraph starting on Page 15, line 4 and ending on line 16 as follows:

The pressure sensitive adhesive does not require the application of heat to adhere the components. The pressure sensitive adhesive can be cured through radiation (ultraviolet (UV) or electron beam (EB)) or can be conventionally dried (either as solvent-based or water-based). UV cured adhesives have been used as the preferred curing/drying method, and for high-speed production, a quick curing solution is required. H.B. Fuller has a part for such a formula, namely Solar Cure RT-7575. Ideally, the anisotropically conductive adhesive is a printable, UV-quick curable, pressure sensitive adhesive that maintains its flexibility. Adhesives to be avoided include those that require UV, heat or microwave curing that have an unacceptable cure time for high speed production. The pressure sensitive adhesive film 38 ideally has a minimal resistance, but metal or other conductors adversely affect the adhesion. The pressure sensitive adhesive film 38 must be suitable for high speed applications, such as having properties as a high speed insertion. It should preferably maintain flexibility without losing its connection.

IN THE CLAIMS:

Cancel claims 1 and 4-12, without prejudice or disclaimer.

Amend the claims as follows:

2. (amended) The RFID tag of claim 28 wherein a pattern of the first and second contact pads is selected from a group comprising butterfly, propeller, polygon and bow-tie patterns.

3. (amended) The RFID of claim 28 wherein a conductive adhesive is applied to at least a portion of the first and second contact pads.

Add the following new claim(s):

28. (New) A radio frequency identification tag comprising:

a first substrate;

an antenna element disposed on the first substrate;

a second substrate;

a first contact pad and a second contact pad disposed on the second substrate; and

a circuit coupled to the first and second contact pads,

wherein the first and second contact pads are designed to make electrical contact with the antenna element.

29. (New) The RFID tag of claim 28 wherein at least one of antenna element, first contact pad and second contact pad is printed.

30. (New) The RFID tag of claim 28 wherein the circuit is electrically coupled to the first and second contact pads.

31. (New) The RFID tag of claim 30 wherein the circuit is electrically coupled to the first and second contact pads via a pressure sensitive adhesive film.

32. (New) The RFID tag of claim 28 wherein the first contact pad is disposed on the second substrate diagonally from the second contact pad.

33. (New) The RFID tag of claim 28 wherein the first and second contact pads are electrically isolated from each other.

34. (New) The RFID tag of claim 28 wherein the first and second contact pads are physically separated from each other.

35. (New) The RFID tag of claim 28 wherein at least one of the first and second contact pads is printed with a material selected from a group consisting of: carbon and a metalized material.

36. (New) The RFID tag of claim 28 wherein the antenna element is divided into a first half and a second half, and wherein the first contact pad is designed to make electrical contact with the first half of the antenna, and the second contact pad is designed to make electrical contact with the second half of the antenna.

37. (New) An assembly comprising:

a first substrate having disposed thereon a first contact pad and a second contact pad; and

a second substrate overlaying the first substrate,

wherein the second substrate comprises an aperture,

wherein the aperture exposes at least a portion of the first contact pad and at least a portion of the second contact pad, and

wherein the aperture is patterned such that it facilitates a placement of a circuit in order to couple to the first and second contact pads.

38. (New) The assembly of claim 37 wherein the second substrate adheres to the first substrate via an adhesive, and wherein the first substrate can be removed from the second substrate.

IN THE ABSTRACT:

Please replace the abstract with the following:

A radio frequency identification tag comprising a first substrate and a second substrate is disclosed. An antenna element is disposed on the first substrate, and a first contact pad and a second contact pad is disposed on the second substrate. A circuit is coupled to the first and second contact pads, and the first and second contact pads are designed to make electrical contact with the antenna element.

IN THE DRAWINGS:

The Applicants have replaced FIG. 1 in accordance with the Examiner's request to have the IC, conductive pads and adhesive in FIG. 1 to agree with those illustrated in FIGS. 3-11.

The Applicants have amended FIG. 2 in accordance with the Examiner's request to remove the improper cross hatching patterns. The Applicants have provided a marked up version of FIG. 2 showing the improper cross hatching pattern that is being deleted in red and a clean version of FIG. 2 without the improper cross hatching pattern.

REMARKS

The claims have been amended by rewriting claims 2-3, canceling claims 1, 4-12, and adding new claims 28-38. Claims 2-3 and 28-38 remain in the application.

Reconsideration of this application is respectfully requested.

Corrections to the drawings, shown in "red," are enclosed for approval by the Examiner. It is respectfully requested that the submission of corrected formal drawings be delayed until such time as the application is deemed to be in condition for allowance.

The specification is objected to for various reasons disclosed in the Office action. With respect to FIG. 3, the components (84, 86, 88) are not shown side-by-side but rather an exploded view of an assembly where all the components come together along the phantom line. The liner (90) shown in FIG. 3 allows for handling of the interposers and/or for facilitating IC attachment (see page 14, line 23 through page 15, line 3). The label (82) is a substrate for the interposer.

The abstract is objected to for not setting forth a concise explanation of the invention. The Applicants have amended the abstract to overcome the Examiner's rejection.

Claims 1-12 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1-12 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Further, claims 1, 3-4, and 6-9 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Tagusa, et al. (USPN 4,963,002). Claims 6 and 12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Shoenthaler (USPN 5,162,613). Claims 1, 3-5, and 6-9 and 11-12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Shreeve, et al. (USPN 5,046,953). Claims 2 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tagusa as applied to claims 1 and 6 above, further in view of Jairazbhoy, et al. (USPN 6,169,253), Brunner, et al. (USPN 6,115,262) and Feger, et al. (USPN 5,360,946). The Applicants cancels claims 1 and 4-12 without prejudice or disclaimer. Cancellation of claims 1 and 4-12 is not an admission that Tagusa or Shreeve anticipates their limitations. Their cancellation instead reflects the Applicants' desire to expeditiously proceed and prosecute the remaining claims in this application.

As amended, each claim in the present application now recites, or depends from claims which recite:

A radio frequency identification tag comprising:
a first substrate;
an antenna element disposed on the first substrate;
a second substrate;
a first contact pad and a second contact pad disposed on the second substrate; and
a circuit coupled to the first and second contact pads,
wherein the first and second contact pads are designed to make electrical contact with the antenna element.

Or

An assembly comprising:
a first substrate having disposed thereon a first contact pad and a second contact pad; and
a second substrate, comprising an aperture, overlaying the first substrate,
wherein the aperture exposes at least a portion of the first contact pad and at least a portion of the second contact pad, and
wherein the aperture is patterned such that it facilitates a placement of a circuit in order to couple to the first and second contact pads.

In short, the novelty provision of 35 U.S.C 102(b) denies patentability when "the invention" was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States. It is well established, however, to "anticipate," pursuant to 102 (b), a single prior art reference must disclose each limitation of a claimed invention or its equivalents functioning in essentially the same way as arranged in the claim.

While Tagusa relates to connecting a semiconductor chip to a substrate of a display panel, and Shreeve relates to mounting an integrated circuit on a printed circuit board, a careful reading of either reference fails to disclose *first and second contact pads disposed on the second substrate designed to make electrical contact with the antenna element disposed on the first substrate*, or a first substrate having disposed thereon a first contact pad and a second contact pad; and a second substrate, comprising an aperture, overlaying the first substrate, *wherein the aperture exposes at least a portion of the first contact pad and at least a portion of the second contact pad, and wherein the aperture is patterned such that it facilitates a placement of a circuit in order to couple to the first and second contact pads.*

Based upon this lack of teaching, the Applicants insist that the cited references fail to describe the invention of the present application. Since cited references fail to disclose essential limitations of the claimed invention, there is no anticipation under 35 U.S.C. 102, because the exclusion of a claimed element from the prior art reference is enough to negate anticipation by that reference. For these reasons, the Applicants assert that the claims in the present application are not anticipated by Tagusa or Shreeve and may therefore be passed to allowance.

Since claims 28 and 36 are believed to be allowable, all claims that depend therefrom contain the limitations of these allowable claims and merely recite additional limitations that should not preclude patentablitlity.

Accordingly, this application is believed to be in proper form for allowance and an early notice of allowance is respectfully requested.

Please charge any fees associated herewith, including extension of time fees, to Deposit Account No. 13-4772.

Respectfully submitted,

By: _____

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